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From-NOVEON INC

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IN THE CLAIMS:

Please amend the claims as set forth in the listing of claims.

LISTING OF CLAIMS

- 1. (currently amended) A toothpaste formulation comprising:
 a rheology modifying crosslinked polyacrylic acid polymer composition;
 a galactomannan gum comprising one or more of guar gum, locust bean gum, cassia gum, and tara gum;
 a multivalent cation containing agent;
 one or more surface active agents; and
 optionally, one or more additional thickening agents.
- 2. The toothpaste formulation of claim 1 wherein said polyacrylic acid polymer composition is polymerized from at least one unsaturated (di)carboxylic acid monomer having a total of from 3 to about 10 carbon atoms, or at least one half ester monomer of said unsaturated dicarboxylic acid with an alkanol having from 1 to about 4 carbon atoms, or combinations thereof; a crosslinking monomer; and optionally one or more monomers selected from oxygen-containing unsaturated comonomers having from 3 to about 40 carbon atoms and alkyl vinyl ethers where said alkyl group contains from 1 to about 20 carbon atoms.
- 3. The toothpaste formulation of claim 2 wherein said at least one unsaturated (di)carboxylic acid monomer is selected from acrylic acid, methacrylic acid, crotonic acid, itaconic acid, maleic acid, aconitic acid, monomethyl fumarate, and maleic anhydride.
- 4. The toothpaste formulation of claim 2 wherein said one or more oxygen-containing unsaturated comomomer is selected from a mono or di alkyl ester of a (di)carboxylic acid where said alkyl group contains from about 1 to about 30 carbon atoms.
- 5. (currently amended) The toothpaste formulation of claim 4 wherein said mono PAGE 4/12* RCVD AT 12/18/2006 6:32:47 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-2/9* DNIS:2738300 * CSID:2164475933 * DURATION (mm-ss):12-00

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ester is selected from monomer is selected from ethyl acrylate, butyl acrylate, 2-ethythylhexyl acrylate, dodecyl acrylate, hexadecyl acrylate, and octyldecyl acrylate.

- 6. The toothpaste formulation of claim 4 wherein said alkyl vinyl ether is selected from methyl vinyl ether, and ethyl vinyl ether.
- 7. The toothpaste formulation of claim 2 wherein said crosslinking monomer is selected from diallylphthalate, diallyl ether, divinyl glycol, divinyl benzene, allyl (meth)acrylate, ethylene glycol di(meth)acrylate, diallyl itaconate, diallyl fumarate, diallyl maleate, allyl ether of sucrose, allyl ether of pentaerythritol, and combinations thereof.
- 8. (currently amended) The toothpaste formulation of claim 1 wherein said multivalent cation is sourced from a calcium based polishing containing agent is selected from dicalcium phosphate, tricalcium phosphate, calcium carbonate, calcium pyrophosphate, calcium silicate, calcium aluminate, and mixtures thereof.
- 9. (currently amended) A method for stabilizing a toothpaste composition comprising a crosslinked polyacrylic acid polymer rheology modifier and a multivalent cation containing agent, said method comprising adding a stabilizing amount of a galactomannan gum selected from one or more of guar gum, locust bean gum, cassia gum, and tara gum.
- 10. The method of claim 9 wherein polyacrylic acid rheology modifier is polymerized from at least one unsaturated (di)carboxylic acid monomer having a total of from 3 to about 10 carbon atoms, or at least one half ester monomer of said unsaturated dicarboxylic acid with an alkanol having from 1 to about 4 carbon atoms, or combinations thereof; a crosslinking monomer; and optionally one or more monomers selected from oxygen-containing unsaturated comonomers having from 3 to about 40 carbon atoms and alkyl vinyl ethers where said alkyl group contains from 1 to about 20 carbon atoms.

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- 11. (currently amended) The toothpaste formulation method of claim 10 wherein said at least one unsaturated (di)carboxylic acid monomer is selected from acrylic acid, methacrylic acid, crotonic acid, itaconic acid, maleic acid, aconitic acid, monomethyl furnarate, and maleic anhydride.
- 12. (currently amended) The toothpaste formulation method of claim 10 wherein said one or more oxygen-containing unsaturated comomomer is selected from a mono or di alkyl ester of a (di)carboxylic acid where said alkyl group contains from about 1 to about 30 carbon atoms.
- 13. (currently amended) The toothpaste formulation method of claim 12 wherein said mono alkyl ester of said carboxylic acid is selected from monomer is selected from ethyl acrylate, butyl acrylate, 2-ethythylhexyl acrylate, dodecyl acrylate, hexadecyl acrylate, and octyldecyl acrylate.
- 14. (currently amended) The toothpaste formulation method of claim 10 wherein said alkyl vinyl ether is selected from methyl vinyl ether, and ethyl vinyl ether.
- 15. (currently amended) The toothpaste formulation method of claim 10 wherein said crosslinking monomer is selected from diallylphthalate, diallyl ether, divinyl glycol, divinyl benzene, allyl (meth)acrylate, ethylene glycol di(meth)acrylate, diallyl itaconate, diallyl furnarate, diallyl maleate, allyl ether of sucrose, allyl ether of pentaerythritol, and combinations thereof.
- 16. (currently amended) The toothpaste formulation method of claim 1 10 wherein said multivalent cation is sourced from a calcium based polishing containing agent is selected from dicalcium phosphate, tricalcium phosphate, calcium carbonate, calcium pyrophosphate, calcium silicate, calcium aluminate, and mixtures thereof.